



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,981	06/26/2003	Manish Vaishya	2002P11414US01; 60,427-60	6450
24500	7590	03/23/2007		
SIEMENS CORPORATION INTELLECTUAL PROPERTY LAW DEPARTMENT 170 WOOD AVENUE SOUTH ISELIN, NJ 08830			EXAMINER FAULK, DEVONA E	
			ART UNIT 2615	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/606,981	VAISHYA ET AL.	
	Examiner	Art Unit	
	Devona E. Faulk	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The applicant has amended to overcome the 112 2nd rejection set forth in the previous office action.
2. A new ground of rejection is made in view of Pfaff.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1,11 are rejected on the ground of nonstatutory double patenting over claims 1,4 and 10 of U. S. Patent No. 7,139,400 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming

Art Unit: 2615

common subject matter, as follows: Claims 1 and 11 of the pending application are broader than the claims 1,4 and 10 of US Patent 7,139,400. Anything that would read on the narrower claims of US Patent 7,139,400 would read on the broader claims 1,11 of the pending application.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1-7,9-16,18-20** are rejected under 35 U.S.C. 102(b) as being anticipated by Pfaff et al (US 5,146,505).

Regarding claim 1, Pfaff discloses a method of calibrating an active noise control system (Figure 1; column), comprising:

selecting at least one noise source sound as a calibration reference (input signal associated with the engine induction noise; column 5, lines 56-57);

determining an actual system response to the calibration reference (OUTPUT1 signal reads on actual response ; and

calibrating the system to accommodate for any difference between the determined actual system response and an expected system response to the calibration reference (column 5, lines 51-column 7).

Regarding claim 11, Pfaff discloses a noise control system (Figure 1), comprising:

a microphone that detects a sound (30 microphone, Figure 1);

a speaker (28 speaker Figure 1); and

a controller that drives the speaker to selectively generate a noise cancellation signal and interprets a signal from the microphone indicating a resulting system response to a combination of a noise source sound and the noise cancellation signal, the controller using at least one noise source sound as a calibration reference, the controller determining an actual system response to the calibration reference and calibrating the system to accommodate for any difference between the actual system response and an expected system response to the calibration reference (controller 26; 5, line 51-column 7).

Regarding claims 2 and 12, Pfaff discloses including selecting a plurality of dominant noise order source sounds and wherein the controller uses a plurality of dominant order noise source sounds (column 4, lines 4-26).

Regarding claims 3 and 13, Pfaff discloses including determining the system response to the sound, determining a harmonic representation of the determined response and using the determined harmonic representation as the calibration reference and a controller that determines the system response and a harmonic

Art Unit: 2615

representation of the determined response, the controller using the determined harmonic representation as the calibration reference (column 5, line 22- column 6, line 9; column 8, lines 7-50).

Regarding claims 4 and 14, Pfaff discloses including subsequently determining an actual harmonic representation of the system response to the same sound and determining whether the actual harmonic representation corresponds to the calibration reference and a controller that determines an actual harmonic representation of the system response at a selected time and determines whether the actual harmonic representation corresponds to the calibration reference (column 5, line 8- column 6, line 9; column 8, lines 7-50).

Regarding claims 5 and 20, Pfaff discloses wherein the system response comprises a microphone signal indicative of a sound detected by the microphone (column 5, lines 53-column 6, line 9).

Regarding claims 6 and 15, Pfaff discloses wherein the noise source is a vehicle engine and including determining the harmonic representation at a plurality of engine speeds and a plurality of throttle conditions (abstract; column 4, lines 5-26; column 5 line 22- column 6, line 9; column 8, lines 7-50).

Regarding claims 7 and 16, Pfaff discloses wherein the noise source is a vehicle engine having a number of cylinders and the selected sound is from a dominant order which is a factor applied to the number of cylinders (abstract; column 4, lines 5-26; column 5 line 8- column 6, line 9; column 8, lines 7-50).

Regarding claims 9 and 18, Pfaff discloses including estimating a noise source sound as an inverse of a produced cancellation signal; and the controller using the estimated noise source sound as the selected at least one noise source sound column 4, lines 5-26; column 5 line 8- column 6, line 9; column 8, lines 7-50).

Regarding claims 10 and 20, Pfaff discloses including estimating a noise source sound as the difference between a system response to the noise source sound and a produced cancellation signal; and the controller using the estimated noise source sound as the selected at least one noise source sound (column 4, lines 5-26; column 5 line 8- column 6, line 9; column 8, lines 7-50).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfaff et al (US 5,146,505).

Regarding claims 8 and 17, Pfaff teaches that the dominant order is a factor applied to the number of cylinders (column 5, lines 8-20). Pfaff fails to disclose that the selected sound is from a dominant order having a factor of $\frac{1}{2}$. The examiner takes

Art Unit: 2615

official notice that it is known in the art that the factor applied to the number of cylinders is determined by a designer according to what will provide the most optimal conditions for noise reduction. It would have been obvious to one of ordinary skill in the art to have the selected sound be from a dominant order having the desired factor of $\frac{1}{2}$ in order to meet design specifications and provide the most optimum environment for reducing noise.

9. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfaff et al (US 5,146,505) in view of Nadim (US 5,434,925).

Regarding claims 20 and 21, Pfaff fails to explicitly teach of the controller repeatedly calibrating the system over time. Nadim discloses an active noise reduction system that repeatedly calibrates over time (column 1, lines 32-46). It would have been obvious to modify Pfaff so that the controller repeatedly calibrates the system over time as taught by Nadim in order to have provided an improved apparatus for canceling noise.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848.

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this

Art Unit: 2615

application should be directed to Art Unit 2615. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DEF



VIVIAN CHIN
SUPERV. & PAT. EXAMINER
TECHNOLOGY CENTER 2600